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Sent: Tuesday, May 05, 2015 5:56 PM
To: Mccarthy, Gina; McTeerToney, Heather
Subject: Waste Water: Comments on Riverbend NPDES Waste Water Permit
Attachments: Comments on Riverbend NPDES Waste Water Permit 05-05-15.pdf

Attached please find comments from the Southern Environmental Law Center on the Riverbend draft NPDES Waste Water Permit. Attachments A-J will follow in a separate email. Please call me if you have any questions.

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VIA EMAIL AND U.S. MAIL

Mr. S. Jay Zimmerman, Acting Director
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Re: Draft NPDES Wastewater Permit – Riverbend Steam Station, #NC0004961

Dear Mr. Zimmerman:

On behalf of the Catawba Riverkeeper Foundation, Inc. (the “Foundation”), we submit the following comments on the draft National Pollutant Discharge Elimination System (“NPDES”) permit noticed for public comment by the North Carolina Department of Environment and Natural Resources (“DENR”), Division of Water Resources (“DWR”), which purports to allow an unlimited number of unspecified and uncontrolled point source discharges from the Riverbend Steam Station (“Riverbend”) coal ash lagoons owned and operated by Duke Energy Carolinas LLC (“Duke”) into Mountain Island Lake (“the Lake”) on the Catawba River.

As set forth below, the proposed permit violates the Clean Water Act (“CWA”) because, among other things, it purports to allow uncontrolled leakage from this wastewater treatment facility, rather than requiring the leaks to be stopped by removing the ash and wastewater from the retired Riverbend site.

I. Introduction

Mountain Island Lake is the drinking water supply reservoir for almost one million people in the Charlotte region. Duke’s unlined coal ash lagoons loom 80 feet above the banks of the Lake and contain 2.7 million tons of wet coal ash held back only by leaking earthen berms. The lagoons leach coal ash pollutants into the groundwater and leak streams of contaminated water that flow into the Lake.

The Foundation’s sampling has revealed that the unpermitted streams of contaminated water, referred to as “seeps,” flowing from the coal ash lagoons into the Lake are discharging

numerous coal ash pollutants, including arsenic, cobalt, manganese, iron, boron, barium, strontium, and zinc.

In at least five instances, arsenic has been found in the surface water of Mountain Island Lake itself in excess of the state water quality standard, including one sample that was more than twice the maximum contaminant level. In addition, the residues from the drinking water treatment facility at Mountain Island Lake removed during the treatment process contain notably high levels of arsenic. Zinc has also been found in Mountain Island Lake near Riverbend at almost four times the water quality standard.

Moreover, Duke University scientists have documented significant coal ash pollution of Mountain Island Lake. In a study that sampled shallow pore water from the lake bottom, the Duke University scientists found arsenic concentrations of 240 parts per billion (ppb) in the drinking water supply reservoir downstream from the Riverbend lagoons. That is 24 times the maximum contaminant level of 10 ppb set by the state and the U.S. Environmental Protection Agency ("EPA"). Laura Ruhl, Avner Vengosh, *et al.*, *The Impact of Coal Combustion Residue Effluent on Water Resources: A North Carolina Example*, Environmental Science & Technology 12,226, 12,231 (2012) (Attachment A).

The study also found that arsenic, manganese, and iron discharged from the Riverbend coal ash lagoons can erupt from the lake bottom into the surface water during periods of low dissolved oxygen in the summer months. *Id.* at 12,230. During such an event, the erupting arsenic is converted from arsenate to a more toxic form, arsenite. *Id.*

On May 24, 2013, DENR filed a verified complaint with the Mecklenburg County Superior Court in which DENR stated – under oath – that Duke’s unpermitted discharges to Mountain Island Lake violate state law and that “without . . . taking corrective action,” these seeps and groundwater violations “pose[] a serious danger to the health, safety and welfare of the people of the State of North Carolina and serious harm to the water resources of the State.” Verified Complaint & Motion for Injunctive Relief, *State of North Carolina ex rel. N.C. DENR, DWQ v. Duke Energy Carolinas, LLC*, No. 13 CVS 9352 (Mecklenburg Co., May 24, 2013) (Attachment B), at ¶ 67. As a result, DENR asked the court to enter a permanent injunction requiring Duke “to abate the violations of N.C. Gen. Stat. § 143-215.1, NPDES Permits and groundwater standards” at Riverbend. *Id.* Prayer for Relief ¶ 2.

Rather than following through on its sworn statements and publicly announced intention to obtain injunctive relief and corrective action, DENR is now proposing to grant Duke amnesty for the numerous leaks emerging from its coal ash wastewater treatment lagoons. This approach is contrary to sound public policy and violates the Clean Water Act. DENR should require that Duke adopt the best available technology to stop the leaks and discharges of polluted wastewater: remove the coal ash and wastewater from the lagoons.

II. Permit Comments

A. The Proposed Permit Violates the CWA's Best Available Technology Requirements

Any NPDES permit issued by DENR for the Riverbend facility must incorporate the Clean Water Act's requirement of best available technology to eliminate discharges if the facility is capable of achieving such elimination. In this case, all the other utilities in the Carolinas are already implementing a guaranteed approach to eliminating their discharges: removal of their unlined coal ash to dry, lined landfill storage or recycling.

1. Removal of the Unlined Coal Ash Is the Best Available Technology for Eliminating the Riverbend Discharges

Under the Clean Water Act, polluters must control their discharges of pollutants using the best available technology economically achievable ("BAT"): "such effluent limitations shall require the *elimination of discharges of all pollutants* if the Administrator finds . . . that such elimination is technologically and economically achievable." 33 U.S.C. § 1311(b)(2)(A). There can be no question that the Riverbend seeps contaminated with residual coal ash that has settled out of the impoundment are, like any other waste stream, subject to TBELS and an independent BAT analysis. The EPA requires that "[t]echnology-based effluent limitations shall be established under this subpart for solids, sludges, filter backwash, and other pollutants removed in the course of treatment or control of wastewaters in the same manner as for other pollutants." 40 C.F.R. § 125.3(g).

In the absence of promulgated effluent limitation guidelines, the NPDES permit writer must use best professional judgment ("BPJ") to determine the BAT standard applicable to the coal ash discharges at Riverbend. 33 U.S.C. § 1342(a)(1)(B); 40 C.F.R. § 125.3; 15A N.C. Admin. Code 2H .0118. When applying BPJ, "[i]ndividual judgments []take the place of uniform national guidelines, but the technology-based standard remains the same." *Texas Oil & Gas Ass'n v. U.S. E.P.A.*, 161 F.3d 923 (5th Cir. 1998). In other words, the DWR must operate within strict limits when identifying BAT based on BPJ.

The first step in identifying BAT is identifying available technologies. At a minimum, technological availability is "based on the performance of the single best-performing plant in an industrial field." *Chem. Mfrs. Ass'n v. U.S. E.P.A.*, 870 F.2d 177, 226 (5th Cir.) *decision clarified on reh'g*, 885 F.2d 253 (5th Cir. 1989); *see Am. Paper Inst. v. Train*, 543 F.2d 328, 346 (D.C. Cir. 1976) (BAT should "at a minimum, be established with reference to the best performer in any industrial category"). In other words, if the technology is being applied by any plant in the industry, it is achievable. *See Kennecott v. U.S. E.P.A.*, 780 F.2d 445, 448 (4th Cir. 1985) ("In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible").

But determination of technological availability is not limited to a single industrial field. "Congress contemplated that EPA might use technology from other industries to establish the [BAT]." 780 F.2d at 453. International facilities can also be used to define BAT. *Am. Frozen Food Inst. v. Train*, 539 F.2d 107, 132 (D.C. Cir. 1976). EPA's NPDES Permit Writers' Manual

states that “BAT limitations may be based on effluent reductions attainable through changes in a facility’s processes and operations. . . . even when those technologies are not common industry practice.”¹ Even pilot studies and laboratory studies can be used to establish BAT; the technology need not be in commercial use to be considered available. See *American Paper Inst. v. Train*, 543 F.2d 328, 353 (D.C. Cir. 1976).

In sum, BAT requires “*a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges.*” *EPA v. National Crushed Stone Ass’n*, 449 U.S. 64, 74 (1980) (emphasis added).

An available and economically achievable technology to eliminate Duke Energy’s Riverbend coal ash discharges is being used today by all the other major utilities in the Carolinas – and it eliminates the risk of a dam failure at the same time. This technology is excavation and removal of the coal ash to dry, lined landfill storage or concrete recycling.

a. SCE&G

In South Carolina, on the same river currently being polluted by Duke’s Riverbend facility, SCE&G had unpermitted seeps and groundwater contamination at its Wateree Station facility on the portion of the Catawba River called the Wateree River. Today, SCE&G is in the midst of removing all its coal ash from unlined lagoons at Wateree Station to safe, dry, lined storage in a landfill away from the Wateree River. SCE&G has already removed approximately 600,000 tons of coal ash from its Wateree facility. Attachment C. In filings with the South Carolina Public Service Commission, SCE&G has publicly stated its commitment to clean up the coal ash at its other facilities in South Carolina as well. Attachment D, at 26. SCE&G has also stated publicly that its cleanup has had no effect on customer rates. Eric Connor, “Coal ash cleanup: Someone will pay; will it be customers?” *Greenville News* (Apr. 28, 2014).

b. Santee Cooper

South Carolina’s Public Service Authority utility, known as Santee Cooper, has also committed to excavate its coal ash from unlined lagoons and store it in dry, lined landfills or recycle it for concrete. Santee Cooper’s Executive Vice President of Corporate Services described the removal and recycling of the unlined coal ash from the lagoons as “cost-effective” and a “triple win” for the utility’s customers, the environment, and the local economy. Attachment E. At last report, Santee Cooper has already removed 164,000 tons from its Grainger Generating Station in Conway, SC, where unlined coal ash at a retired facility like Riverbend had contaminated the groundwater and adjacent wetlands with arsenic and other pollutants. Attachment F. Santee Cooper has removed over 100,000 tons from its Jefferies Generating Station in Moncks Corner, SC. David Wren, “Coal ash removal at Santee Cooper’s power plants years ahead of schedule,” *Post & Courier* (Jan. 26, 2015). And it will begin removing the coal ash from its Winyah Generating Station in Georgetown, SC, later this year. *Id.* Santee Cooper also states that its actions to eliminate the unlined storage of coal ash will have

¹ EPA, NPDES Permit Writers’ Manual (Sept. 2010) at p. 5-16, available at: http://water.epa.gov/polwaste/npdes/basics/upload/pwm_2010.pdf.

no effect on its rates. Jim Pierobon, "Smart Utilities Know There Are Responsible Solutions for Their Coal Ash Waste," *The Energy Fix* (Jan. 12, 2015).

c. Duke Energy – South Carolina

In April 2015, conservation groups signed an agreement with Duke Energy for Duke to remove all the coal ash – more than three million tons – from its W.S. Lee facility on the Saluda River in Anderson County, South Carolina. Attachment G. Duke will remove all the coal ash to dry, lined storage away from the river, including the ash from two leaking lagoons and in an ash storage area near the lagoons. In September 2014, the South Carolina Department of Health and Environmental Control entered into a consent enforcement agreement with Duke Energy in which Duke was required to remove coal ash from two other storage areas on the Saluda River's banks at the Lee facility. Attachment H.

Duke Energy's other coal ash site in South Carolina is the H.B. Robinson facility on Lake Robinson and Black Creek in Darlington County, SC. This site contains approximately 4.2 million tons of coal ash. It has serious groundwater contamination and a history of low-level radioactive waste being disposed of in the unlined coal ash basin. On April 30, 2015, after months of public pressure from conservation groups calling for a cleanup, Duke publicly committed to excavating all the coal ash at Robinson and storing it in a dry, lined landfill on site. Sammy Fretwell, "Duke to clean up toxin-riddled waste pond in Hartsville," *The State* (Apr. 30, 2015).

d. Duke Energy – North Carolina

Duke Energy has publicly committed to clean up all its unlined coal ash storage at Riverbend, along with three other facilities in North Carolina. Tonya Maxwell, "Duke announces coal ash removal plans across 4 NC sites," *WCNC* (Nov. 13, 2014). Duke's public commitment to clean up Riverbend and the other sites is proof positive that dewatering and ash removal are achievable as BAT to stop the ongoing discharges of coal ash pollutants from the Riverbend lagoons. Accordingly, ash removal should be required in the NPDES permit for Riverbend in order to ensure the discharges are stopped and not subject to later corporate or legislative changes.

In sum, excavation and dry, lined storage of coal ash formerly stored in unlined, leaking lagoons is already standard practice among all the other major utilities in the Carolinas, and Duke has committed to clean up six of its coal ash sites as well. Removal of the ash to dry, lined storage is not only economically achievable but cost effective, according to the utilities putting it into practice. And it eliminates the continuing seepage into groundwater and surface waters, as well as the risk of a catastrophic dam failure or spill, such as Duke Energy's Dan River spill in February 2014.

Accordingly, DENR must incorporate into the NPDES permit provisions requiring the dewatering and excavation of the unlined coal ash from these leaking impoundments at Riverbend, in combination with a reasonable schedule of compliance to achieve the CWA's goal of eliminating the discharge of pollutants to public waters.

2. The N.C. Coal Ash Management Act Is Not a Substitute for Clean Water Act Protections

As currently written, the N.C. Coal Ash Management Act would require Duke Energy to remove the ash from the Riverbend lagoons. However, that state statutory requirement does not eliminate the need for a Clean Water Act pollution elimination permit that requires the Best Available Technology for treating – and eliminating – water pollution. Apart from any requirements in the Coal Ash Management Act, this Clean Water Act permit must require the cleanup of these primitive coal ash storage sites and the removal of the ash to safe, dry, lined storage.

First, the Coal Ash Management Act may be amended or repealed by the N.C. legislature at any time. Indeed, the State of North Carolina has argued before the N.C. Supreme Court that the Coal Ash Management Act itself weakened existing North Carolina protections of groundwater against coal ash pollution. The current existence of a state statutory requirement is no guarantee that that requirement will exist throughout the term of this NPDES permit.

Second, the Clean Water Act's requirements apply independent of and separate from any state statute. DENR has an obligation under federal law to put in place a Clean Water Act permit that complies with and carries out the requirements of the Clean Water Act, regardless of any state law provisions. As explained in the preceding section, the Clean Water Act itself requires the cleanup of these primitive and defective coal ash storage sites and removal of the ash to safe, dry, lined storage away from the River.

Finally, the Coal Ash Management Act itself provides that it is in addition to any other provisions of law. By its own terms, the existence of the Coal Ash Management Act does not obviate the obligation of DENR to put in place a Clean Water Act permit that carries out the requirements and purposes of the Clean Water Act, including the available and economically achievable elimination of the discharges at Riverbend.

3. The Proposed Permit's Authorization of the Seeps Violates the BAT Requirements

The proposed permit would authorize Duke's wastewater treatment facility to simply spring leaks and discharge "uncontrolled releases" directly into waters of the United States. As discussed in more detail below, this blanket authorization of unknown quantities of point source discharges is a fundamental violation of the CWA.

But in addition, this approach violates the CWA's requirement that polluters like Duke Energy control their discharges using the best available technology. The proposed permit would allow Duke Energy to *avoid* using key components of even its existing, minimal treatment technology of settling out pollutants in the lagoons and skimming discharge water from the top via risers connected to the permitted outfalls. This is an impermissible step backwards from using available treatment technology, and accordingly it violates the CWA's BAT requirements.

4. The Draft Permit Acknowledges That Zero Discharge Is Attainable For Seeps But Fails To Impose Corresponding TBELS Or Any Schedule Of Completion.

The fact sheet itself concedes a zero discharge technological solution available to Duke Energy to address coal ash seeps, but DENR has failed to impose TBELs based on that technology.

The Fact Sheet acknowledges, with respect to seeps at the Riverbend plant, that “[r]eleases of this nature would typically be addressed through an enforcement action requiring their elimination” The Fact Sheet further recognizes the availability of a zero discharge solution – collection and “rerouting the discharge” and “discontinuing the discharge” are available solutions for meeting technology-based effluent limits. Condition A(5) n.4. Nonetheless, DENR requires no action from Duke Energy to complete those measures, deferring instead to the eventual completion of a parallel state process under the Coal Ash Management Act. But a deferred and unenforceable promise of future action under a separate state statute does not satisfy the requirements of the federal Clean Water Act.

First, the state process under CAMA is not a substitute for compliance with North Carolina’s duties under the Clean Water Act pursuant to its delegated program. Apart from any requirements in the Coal Ash Management Act, this Clean Water Act permit must require the cleanup of these primitive coal ash storage sites and the removal of the ash to safe, dry, lined storage. DENR has an obligation under federal law to put in place a Clean Water Act permit that complies with and carries out the requirements of the Clean Water Act, regardless of any state law provisions. Indeed, EPA can withdraw North Carolina’s authority to manage its own Clean Water Act program if the State fails to follow federal regulations or if the “State legislature . . . strik[es] down or limit[s]” a state agency’s authority to implement the Clean Water Act consistent with federal law. 40 C.F.R. § 123.63(a)(1)(i-ii). Recognizing this, the General Assembly was clear that the requirements of Coal Ash Management Act are “in addition to any other requirements for identifying discharges,” “for the assessment of discharges,” or “for corrective action tgo prevent unpermitted discharges” from coal ash impoundments. N.C.G.S. § 1320A-309.212(a)(1), (b), (c).

Second, while the fact sheet is explicit that permitting illegal seeps is “an interim measure” pending implementation of the BAT; the draft permit does not require implementation of the ultimate solution. The Clean Water Act requires more. DENR *must* require compliance with the discharge limits achievable by the implementation of the best available technology *now*.

EPA regulations unambiguously prohibit the use of compliance schedules to comply with BAT requirements. EPA defines a compliance schedule as “a schedule of remedial measures, . . . including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events)” 40 C.F.R. § 122.2. Under EPA regulations, DWQ may use compliance schedules to achieve “compliance with CWA [Clean Water Act] and regulations . . . as soon as possible, *but not later than the applicable statutory deadline under the CWA.*” 40 C.F.R. § 122.47(a)(1)(emphasis added). The Clean Water Act requires dischargers of color pollution to comply with BAT-based effluent limits by March 31, 1989. 33 U.S.C. §1311(b)(2)(A), (F). Thus, “a permit writer may not establish a compliance schedule in a permit for TBELs [technology-based effluent limits] because the statutory deadlines for meeting technology

standards . . . have passed.” EPA Permit Writers Manual, Section p. 9-8 (2010); *see also* EPA Permit Writers Manual, Section 9.1.3 p. 148 (1996). Thus, EPA regulations prohibit use of compliance schedules to comply with attainable BAT limits for seeps.

Even if DENR had the authority to delay compliance with limits attainable through an acknowledged BAT, the draft permit does not impose a valid a compliance schedule. The Fact Sheet notes that installation of a BAT solution for seeps would require construction and time to implement, but sets no time limits for implementation of those requirements. A compliance schedule must impose “an *enforceable* sequence of interim requirements” leading to Clean Water Act compliance. 40 C.F.R. § 122.2 (emphasis added). The Draft Permit requires no concrete steps towards ultimate achievement of the zero discharge BAT standard acknowledged by the draft permit as attainable for seep discharges.

B. The Proposed Permit Allows Uncontrolled Leaks from the Lagoons In Violation of the Clean Water Act, Defeats the Purpose of the Permit in Violation of the Clean Water Act, and Violates the Public Notice and Comment and Other Requirements of the Clean Water Act

The proposed permit (section A.17) purports to authorize *any* leaking streams of contaminated coal ash wastewater discharging from the Riverbend lagoons into Mountain Island Lake that may emerge *anywhere* along the facility’s property line, *now or in the future* – without being identified and characterized in the NPDES application or the permit itself.

1. The Proposed Permit Violates the CWA’s Prohibition on Unpermitted Point Source Discharges

Each of these streams of contaminated water is a point source discharge to surface waters of the United States. Thus, the proposed permit purports to authorize unspecified point source discharges, in violation of the CWA, 33 U.S.C. § 1311(a).

Under the CWA, “*Every identifiable point* that emits pollution is a point source which must be authorized by a NPDES permit” *U.S. v. Tom-Kat Dev., Inc.*, 614 F. Supp. 613, 614 (D. Alaska 1985) (citing 40 C.F.R. § 122.1(b) (1). *Accord U.S. v. Earth Sciences, Inc.*, 599 F.2d 368, 373 (10th Cir. 1979); *Legal Envtl Assistance Found., Inc. v. Hodel*, 586 F. Supp. 1163, 1168 (E.D. Tenn. 1984); *U.S. v. Saint Bernard Parish*, 589 F. Supp. 617 (E.D. La. 1984)). The “NPDES program requires permits for the discharge of ‘pollutants’ from *any* ‘point source’ into ‘waters of the United States.’” 40 C.F.R. § 122.1(b)(1) (emphasis added).

Rather than complying with this straightforward requirement of the CWA, the proposed permit instead declares that a fictional “Outfall 010” would encompass any and all “seeps entering the river from the upstream edge of permittee’s property to the downstream property boundary . . . as if entering at one location.” This approach is impermissible under the Clean Water Act.

The proposed permit attempts to limit the total amount of seep discharge and maximum allowable pollutant concentrations – but those limits are totally impracticable. The Fact Sheet

itself acknowledges that the seeps are “difficult to monitor and control, and it is difficult to accurately predict their impact on water quality.” Indeed, Duke Energy is unable even to complete a competent application for an NPDES permit for these future wastestreams because it lacks the most fundamental information required by Form 2C – the Outfall locations and flow characteristics. See Permit Writer’s Handbook 4.3.5. And even if these requirements could be put into effect – which is highly unlikely, as DENR acknowledges – they could not remedy this fundamental flaw in the permit’s approach to the polluted leaks.

The proposed permit’s blanket authorization of the seeps violates the most basic principles of the Clean Water Act. DENR itself acknowledges in the Fact Sheet that “[t]he CWA NPDES permitting program does not normally envision permitting of *uncontrolled releases* from treatment systems” and “[r]eleases of this nature would typically be addressed through an *enforcement action requiring their elimination* rather than permitting” (emphasis added). DENR’s statements are even more striking in light of the fact an enforcement action filed by DENR is currently pending against Duke Energy for those very same seeps at Riverbend.

2. The Proposed Permit Attempts to Shield Duke from Further Legal Violations

The seeps are prohibited under Duke Energy’s current NPDES permit. As DENR itself acknowledges in the Fact Sheet, “uncontrolled releases” of leaking wastewater should be the subject of an enforcement action requiring their elimination. Indeed, DENR has filed such an action in state Superior Court. Moreover, the United States Department of Justice has charged Duke Energy with criminal violations of the Clean Water Act for exactly such unpermitted discharges, including at Riverbend. Duke has indicated publicly it will plead guilty to all the charges and pay \$102 million as a result of its criminal violations of law.

Shockingly, DENR’s proposed permit purports to legalize these previously illegal discharges with the stroke of a pen, rather than requiring Duke to take any action to remedy the violations. Even more shockingly, DENR is proposing to grant Duke amnesty for unknown numbers of *future* violations of the CWA as well. This is nothing more than an attempt to shield Duke Energy from having to comply with the laws it has been violating for years. DENR’s approach is aimed at protecting Duke, not the public, and is an affront to law-abiding North Carolinians.

3. The Proposed Permit Violates the CWA by Purporting to Authorize a Leaking Wastewater Treatment Facility

This blanket authorization of uncontrolled leaks is contrary to the permitting of this site as a wastewater treatment facility. Duke Energy is allowed to discharge from this point source on the basis that the coal ash lagoons are wastewater treatment facilities. By allowing uncontrolled and undesigned leaks and flows from the walls, sides, bottom, and dam of this supposed wastewater treatment facility, DENR would be permitting a wastewater treatment facility that leaks. DENR would be permitting a wastewater treatment facility that is fundamentally defective, because the system does not discharge treated water through its designed treatment process and does not contain the pollutants removed by its designed

treatment system. By purporting to incorporate these unidentified leaks into the permit without even knowing what pollutants they discharge or where they discharge, DENR would allow Duke to continue operating a defective and dysfunctional wastewater treatment system that leaks uncontrolled streams of contaminated wastewater, including new wastewater streams that DENR would purport to incorporate into the permit without an application or permit modification, as the CWA requires.

In this way, the proposed permit defeats the purpose of the waste treatment system authorized by the permit. The lagoons treat the waste streams they receive by settling in the lagoons. Water is discharged from the top of the lagoon via a riser system that leaves the more polluted wastewater and settled pollutants in the lagoon. If the lagoons are allowed to leak from their sides and bottom, this system is circumvented. The pollutants that have been settled and stored in the lagoons cannot be allowed to pollute public waters, or else the entire purpose and function of the waste treatment system would be undone.

For the same reasons, these existing and future leaks are in no sense an "outfall" and cannot be permitted as a mythical "Outfall 010." This is not a legitimate permitted "outfall" but a total fiction to allow discharges that violate the Clean Water Act.

DENR does not issue permits to sewage treatment plants that authorize them to spring uncontrolled leaks. The proposed permits are a prime example of DENR giving Duke Energy special treatment.

4. The Proposed Permit's Blanket Authorization of the Seeps Violates the CWA's Public Participation Requirements

As well, this arrangement would allow Duke to evade public notice and comment and the opportunity for a public hearing and for judicial review; along with all the other requirements of the state NPDES permitting program, 33 U.S.C. § 1342(b). A new undesigned and undesignated flow of polluted water may spring from this supposed wastewater treatment facility at any time. The permit asserts that these newly identified seeps "will not be considered as new outfalls." Condition A(21). It further promises that new seeps will be "administratively added" to the permit. That new outfall will not have been the subject of the public notice, comment, and hearing requirements, or any other requirements of the Clean Water Act. Instead, this permit purports to authorize those discharges and outfalls in advance, without any of the process and protections required by the Clean Water Act. As drafted, the permit would allow Duke and DENR to evade the Clean Water Act entirely for these new and undescribed outfalls and discharges.

But it is beyond the authority of DENR to authorize new point source discharges without proceeding through the procedures of a modification of the NPDES permit with public comment and EPA oversight. EPA's regulations authorize limited administrative changes to an active permit through minor modifications, 40 U.S.C. § 122.63, none of which condone the administrative addition of a new point source discharge, which must be permitted as an NPDES outfall. Ultimately, this promise of a permit shield and administrative amendment of Duke Energy's permit has the effect of bypassing public comment, EPA oversight and judicial review

for the life of this permit. This scheme is inconsistent with the requirements of the Clean Water Act.

The existing permit and all prior ones are the result of the full agency process, public review, public comment, and the procedures required by the Clean Water Act and North Carolina law. These illegal flows of polluted water into Mountain Island Lake, forbidden by the existing permit, cannot be made legitimate by totally changing the permit to allow contaminated water to pop out of this purported wastewater treatment facility and flow into the Lake. It is inconceivable that a permitted wastewater treatment facility would be allowed to repeatedly open up leaks and discharge polluted water from the supposed wastewater treatment lagoons into a drinking water reservoir. This proposed option is not law enforcement or pollution elimination at all, but instead an option for the law enforcement agency to try to find a way to make unlawful and polluting activities "permitted" and avoid dealing with the risks to the public. This stratagem should not be adopted by a state agency that has the responsibility of enforcing the law and protecting the State's natural resources and the public interest.

Instead, this permit should require the implementation of the proven method of eliminating seeps from these defective wastewater treatment systems – movement of the ash to safe, dry lined storage and appropriate dewatering of the lagoons.

C. The Proposed Permit Violates the Clean Water Act's Anti-Backsliding Provisions

The proposed permit would allow Duke Energy to operate a leaking wastewater treatment system. By definition, these leaks do not discharge through the permitted outfall structures, which include risers that are designed to ensure that settled pollutants remain in the lagoons and water is discharged from the top of the lagoon to the outfall discharge pipes. And DENR itself describes its approach to the seeps as allowing "uncontrolled releases." Fact Sheet at 3. Thus, the proposed permit would allow Duke Energy to avoid even the minimal treatment technology in place for its currently permitted outfalls.

The Clean Water Act's NPDES permitting program is structured around progressive improvements in pollution control technology. The requirement of Best Available Technology ("BAT") is predicated on the concept that as treatment technology improves, it will be incorporated into National Pollutant Discharge *Elimination* System permits in order to make progress towards Congress's "national goal" of eliminating discharges of pollutants to waters of the United States. 33 U.S.C. §§ 1251(a)(1).

For this reason, the CWA includes anti-backsliding requirements to ensure that the limits and conditions imposed new or modified NPDES permits for a facility are at least as stringent as those in previous permits. 33 U.S.C. § 1342(o); 40 C.F.R. § 122.44(l)(1) ("[W]hen a permit is renewed or reissued, interim effluent limitations, standards or conditions must be *at least as stringent* as the final effluent limitations, standards, or conditions in the previous permit . . .").

The CWA's anti-backsliding requirements apply to *all* NPDES permit provisions, not just effluent limits based on BPJ. 40 C.F.R. § 122.44(l)(1); *In the Matter of Star-Kist Caribe, Inc., Petitioner*, 2 E.A.D. 758 at *3 (E.P.A. Mar. 8, 1989) (emphasis added). EPA, NPDES Permit

Writers' Manual Chapter 7, § 7.2.2, p. 7-4 (Sept. 2010), *available at* http://water.epa.gov/polwaste/npdes/basics/upload/pwm_chapt_07.pdf.

The proposed permit would, for the first time, allow Duke Energy to avoid using even its existing treatment technology in favor of “uncontrolled releases.” Fact Sheet at 3. For this reason, the proposed permit violates the CWA’s anti-backsliding requirements. Among other things, the proposed permit would for the first time: (1) allow uncontrolled and undesigned releases from the coal ash lagoons; (2) permit a set of undesigned and uncontrolled releases as a single mythical “outfall”; (3) allow uncontrolled and undesigned releases from a permitted wastewater treatment facility; (4) allow a permitted wastewater treatment facility to leak and spew polluted water from the facility into State waters and navigable waters; (5) allow a permitted wastewater facility to operate in a way that circumvents and goes around its permitted and designed treatment system and to leak and discharge polluted water; (6) allow the facility to release discharges that are prohibited under its current permit; and (7) create a new meaning and permitted category of “outfall” to allow uncontrolled, undesigned, and unpredicted leaks and flows of polluted water.

For the same reasons, the proposed permit’s attempt to authorize the seeps violates the CWA’s anti-backsliding provisions because it is inconsistent with the Removed Substances provision of the current Riverbend NPDES permit, which provides an important limitation in the permit to prevent the entrance of pollutants removed in the course of settling treatment from entering State and navigable waters.

The State of North Carolina has included an important standard condition in its NPDES permits for waste treatment systems like the Riverbend lagoons, known as the Removed Substances provision. The Removed Substances provision of the current Riverbend NPDES permit, Part II.C.6, provides:

“Solids, sludges . . . or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of . . . in a manner such as to *prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States.*” (emphasis added)

This is a common-sense provision to prevent pollutants removed by waste treatment facilities from escaping out into the environment. The Removed Substances provision is an important component of the Clean Water Act’s protections, and prevents waters of the United States from being polluted by waste treatment facilities such as the Riverbend coal ash settling lagoons. *In the Matter of: 539 Alaska Placer Miners*, Nos. 1085-06-14-402C & 1087-08-03-402C, 1990 WL 324284 at *8 (EPA 1990) (inclusion of Removed Substance provision “is based on the simple proposition that there is no way one can protect the water quality of the waters of the U.S if the [polluter] is allowed to redeposit the pollutants collected in his settling ponds”) (Doc. 26-9); 40 C.F.R. § 440.148(c) (Removed Substances provisions ensure that “measures shall be taken to assure that pollutants materials removed from the process water and waste streams will be *retained in storage areas*”) (emphasis added).

In the context of the Riverbend permit, the removed substances provision is also the implementation of a required permit component under the implementing regulations of the Clean Water Act. The implementing regulations for the Clean Water Act require that “[t]echnology-based effluent limitations shall be established under this subpart for solids, sludges, filter backwash, and other pollutants removed in the course of treatment or control of wastewaters in the same manner as for other pollutants.” 40 C.F.R. § 125.3(g). Under the prior permit issued to Duke Energy for the Riverbend plant, DENR did not set individual TBELs for seeps from the ash basin but rather took the only responsible step, of treating zero liquid discharge as the BAT for contaminated seeps from a coal ash impoundment. That is, consistent with the requirement to set TBELs for pollutants removed by the wastewater treatment ash ponds, the prior permit prohibited *any* discharge of removed substances to waters of the United States.

DENR itself has cited Duke Energy for violating the Removed Substances provision by allowing pollutants to enter waters of the State and navigable waters due to uncontrolled releases from Duke Energy’s coal ash lagoons at its Dan River facility. In a February 28, 2014 Notice of Violation, DENR cites the discharge “of coal combustion residuals from the ash pond to the Dan River, class C waters of the State” as violating the Removed Substances provision: “Failure to utilize or dispose solids removed from the treatment process in such a manner as to prevent pollutants from entering waters of the State (Part II, Section C. 6. of NPDES permit).” Part II.C.6 of the Dan River NPDES Permit contains the Removed Substances permit provision.

At Riverbend, the proposed permit purports to allow pollutants removed in the course of treatment to enter waters of the State and United States via what DENR admits are “uncontrolled releases” that may spring out of the lagoons and start discharging to public waters at any time. As such, the proposed permit’s approach to authorizing the seeps violates the existing permit’s Removed Substances Provision, and to the extent it is inconsistent with the Removed Substance Provision, it violates the CWA’s anti-backsliding requirements in this additional way.

D. The Effluent Limitations in the Proposed Permit Are Too Weak

In addition to the fundamental problems described above, DENR’s proposed effluent limits and monitoring of the seeps do not satisfy the technology-based treatment requirements of the CWA. 33 U.S.C. §§ 1311, 1342(a)(1); 40 C.F.R. § 125 (“Technology-based treatment requirements under section 301(b) of the Act represent the *minimum level of control that must be imposed in a permit* issued under section 402 of the Act” (emphasis added)). Where promulgated effluent limitation guidelines are not available, the NPDES permit writer must use best professional judgment (“BPJ”) to determine the best available technology applicable to the discharge.² “When issuing permits according to its BPJ, EPA is *required* to adhere to the technology-based standards set out in § 1311(b) . . . States issuing permits pursuant to § 1342(b) stand in the shoes of the agency, and thus must similarly pay heed to § 1311(b)’s technology-based standards when exercising their BPJ.” *NRDC v. U.S. EPA*, 859 F.2d 156, 183 (D.C. Cir. 1988) (citing *NRDC v. Costle*, 568 F.2d 1369, 1380-81 (D.C. Cir. 1977)).

² Memorandum from the Director of Office of Wastewater Mgmt., U.S. EPA, on NPDES permitting of Wastewater Discharges from Flue Gas Desulphurization and Coal Combustion Residuals Impoundments at Steam Electric Power Plants (June 7, 2010) (hereinafter, “the Hanlon Memo”), Attachment I.

In this case, the effluent limitations are deficient for a number of reasons. DENR must add limits for more pollutants associated with coal ash, strengthen the current TBELs, require more frequent monitoring, and take into account lack of flow in the receiving water body.

1. More TBELs Are Needed

First, the permit sets technology-based effluent limitations (TBELs) for only four pollutants: arsenic, selenium, mercury, and nitrate/nitrite as N. This truncated list is inadequate and leaves mercury as the sole proxy for the mobility of all heavy metals. Coal ash can contain different concentrations of various contaminants depending on the origin of the coal, and each of these contaminants may behave very differently depending upon the site-specific conditions. Trace metals can form complexes with ions (such as chloride or sulfate) or dissolved organic carbon. Some metals form complexes much more readily than others. These complexes change the speciation of the metal in the water and thus can greatly impact its mobility (typically making it more mobile). Mobility of different metals can also be significantly impacted by pH or other site-specific factors.

Thus, relying on mercury as the only TBEL metal means significant contaminants in the Riverbend discharges may not be controlled. Metals such as cadmium, nickel, and zinc are typically present in coal ash in greater concentrations than mercury – often orders of magnitude greater. For example, zinc has been found in the seeps, and it has been found in the surface water of Mountain Island Lake near Riverbend at almost four times the water quality standard. Other coal ash metals of concern include thallium and vanadium. Accordingly, TBELs need to be added for thallium, vanadium, cadmium, nickel, and zinc.

In addition, the Foundation's own sampling has revealed concentrations of cobalt up to 52 times the standard in the seeps, as well as strontium and boron, so these substances must be included in the effluent limitations for the seeps. For the same reason, these substances should be added to the substances required to be sampled from the groundwater monitoring wells and to the effluent limits for the permitted Outfall 002 at Riverbend.

All the effluent limitations for the Outfall 002 discharge should also apply to the seeps because the seeps come from the coal ash lagoons. Indeed, the need for technology-based effluent limits for the seeps is greater because these seeps, by definition, avoid the existing treatment technology of the riser structures connected to the permitted Outfall 002 pipe. Similarly, limits for Total Nitrogen and Total Phosphorus should be added, rather than just monitor and report.

EPA's Merrimack coal ash NPDES permit developed TBELs for many more pollutants than DENR did for Riverbend's Outfall 002. EPA, Determination of Technology-Based Effluent Limits for the Flue Gas Desulfurization Wastewater at Merrimack Station in Bow, New Hampshire (Sept. 23, 2011), at 48-49. Attachment J. In addition to the four pollutants DENR included for Outfall 002, EPA included TBELs for cadmium, chromium, copper, lead, manganese, zinc, chlorides, and total dissolved solids. Technology-based numerical effluent limitations for these substances should be added to the DENR permit.

2. The TBELs Proposed in the Draft Permit Are Too Weak

Several of these four "TBEL" effluent limitations are themselves too weak.

First, DENR does not appear to have performed an adequate analysis of available treatment technologies, either at North Carolina coal ash facilities or elsewhere. Permit writers must look to resources such as EPA guidance, reports and similar documents, and more sophisticated permits from other states to appropriately set BAT and BPJ limits.³

For example, an EPA-issued TBEL determination for the Merrimack Station in Bow, NH quotes EPA's Hanlon Memo stating that "[s]even power plants in the U.S. are operating or constructing treatment systems that follow physical/chemical treatment with a biological treatment stage to supplement the metals removals with substantial additional reductions of nitrogen compounds and/or selenium." Accordingly, EPA determined it should impose these technology treatment requirements as well. Attachment J. (Subsequently, the Merrimack facility installed an even more sophisticated zero liquid discharge system, and EPA has now put out new draft NPDES permits to reflect the facility's ability to eliminate these discharges of pollutants.)

In the draft Riverbend permit, DENR states that it based its TBELs on the "95th percentile of the effluent data" discharging over five years from Duke Energy's Allen, Marshall, and Belews Creek facilities. Fact Sheet at 4-5. Significantly, Allen and Belews Creek were among the facilities examined in the EPA Merrimack analysis. Attachment J at 32.

However, the TBELs contained in the draft NPDES permit for Riverbend are significantly higher than the Merrimack limits, even though they are supposedly based on the same facilities analyzed by EPA for Merrimack, including Allen and Belews Creek. Thus, DENR appears not to have performed the same rigorous TBEL analysis that EPA did, nor does it appear to have looked to more sophisticated effluent analyses and treatment technologies like the Merrimack facility.

For example, the arsenic limit in these permits is higher than the Merrimack limit. Arsenic is a known carcinogen that causes multiple forms of cancer in humans. It is also a toxic pollutant, 40 C.F.R. § 401.15, and a priority pollutant, 40 C.F.R. Part 423 App'x A. Arsenic is also associated with non-cancer health effects of the skin and the nervous system. In the Merrimack, NH permit, where EPA analyzed the treatment technology at Allen and Belews Creek and based its limits on what could be achieved, EPA set the monthly average at 8 ug/L. Attachment J at 39. But in the Riverbend draft permit, the monthly average limit for arsenic is set at 10.5 ug/L.

Moreover, Mountain Island Lake already has significant arsenic contamination from the Riverbend coal ash lagoons. As described above in the Introduction, the surface water of Mountain Island Lake has been shown to contain concentrations of arsenic well above the MCL on at least five occasions, the downstream water treatment systems have to remove significant

³ Permit Writers Manual (1996) at 71-73.

quantities of arsenic in order to make the water drinkable, and Duke University scientists have found extremely high concentrations of arsenic in the lake sediments, where it can erupt in a more toxic form when the temperature and dissolved oxygen conditions are right. Attachment A, at 12,230-31. Accordingly, the discharges of arsenic to this drinking water supply reservoir from Riverbend must be more tightly controlled, with a monthly average of no more than 8 ug/L.

Similarly, EPA's Merrimack permit limit for selenium set the monthly average at 10 ug/L, versus 13.6 ug/L in the Riverbend permit; and the Merrimack permit set a daily maximum of 19 ug/L, versus 25.5 ug/L in the Riverbend permit. Attachment J at 47.

For Mercury, EPA noted that it could have set the monthly average limit at 22 ng/L, versus 47 ng/L for Riverbend, but then noted that the Merrimack facility actually incorporates an additional "polishing" step that allowed the technology based limit for mercury in the Merrimack permit to be set at just 14 ng/L. *Id.* at 44. If this limit is achievable in New Hampshire, it should be achievable in North Carolina as well.

3. The Permit Fails to Set Rigorous Technology-Based Standards For Many Pollutants

The method by which many of the effluent limitations for the seeps were set appears to be arbitrary and capricious. The draft permit (at A.17) states that "[t]he maximum allowable parameter concentration in Table 1 is determined by multiplying the highest baseline seep concentration levels by 10." It is nonsensical to say that the best available pollution control technology is to take what is already happening at this site and allow far more pollution on top of that. There are numerous problems with this approach.

First, taking an unknown "baseline seep concentration" and multiplying it by 10 does not constitute the imposition of a *technology-based* effluent limitation, the minimum standard allowed under the Clean Water Act. Moreover, water quality based standards cannot be used to justify weaker limits. Water quality based effluent limits may be imposed only where they are "*more stringent*" than technology based limits. 33 U.S.C. § 1311(b)(1)(C) (emphasis added). To comply with the CWA, DENR needs to require that Duke Energy actually treat its discharges, including the seeps, using the best available technology. There is no evidence in the permit or its Fact Sheet that DENR has done this.

The Fact Sheet states that the reasonable potential analysis (RPA) analyzed the highest concentration for each parameter chosen from the 12 identified seeps, and it also states that there was no reasonable potential to violate water quality standards or EPA criteria. However, as discussed in the preceding paragraph, water quality based limits must be *more stringent* than technology based limits, not less stringent. An agency cannot use dilution or water quality standards to allow a polluter to evade technology based standards being applied elsewhere. And even if DENR were correct that the seeps would not cause surface water quality violations – a claim the Foundation disputes, especially given the documented surface water quality violations at Riverbend – there is absolutely no rationale for DENR to then multiply the seep concentrations by 10 to set the effluent limits.

Second, there is no information in the permit about what “baseline seep concentration levels” were used in this flawed approach. Thus, there is no way for the public to evaluate how these limits were arrived at because they are presented in a vacuum. The Fact Sheet’s explanation of the reasonable potential analysis (p. 4) states only that the “highest concentration for each constituent was chosen from one of the 12 seeps” and analyzed for potential water quality violations.

Third, DENR’s numbers are wrong for Riverbend. The Foundation has sampled the seeps at Riverbend, and has detected far higher concentrations of a variety of coal ash pollutants in the seeps than DENR’s Table 1 would indicate. For example, seeps sampled by the Foundation at Riverbend contained cobalt at 52 times North Carolina’s Interim Maximum Allowable Concentration, along with boron, strontium, and zinc, among other pollutants. Yet there is no limit for cobalt, boron, strontium, or zinc imposed in the permit. This oversight needs to be corrected. Moreover, DENR’s approach would seem to indicate that arsenic is only present in the seeps at one-tenth the listed “maximum allowable parameter concentration” amount, which would translate to an arsenic concentration in the seeps of just 1.45 ppb. But a seep at Riverbend sampled by the Foundation contained arsenic at over 20 ppb. This discrepancy does not mean DENR should simply raise the arsenic limit even higher – far from it. Instead, it means DENR has not adequately considered the amount of pollutants currently flowing into Mountain Island Lake, and needs to impose robust technology-based effluent limitations, rather than downplaying the significance of the seep pollution flowing into the drinking water reservoir.

Fourth, the effluent limits and RPA are flawed because it is not appropriate to assume that the waste stream is being diluted by the full flow of the Catawba River. The discharges from the ash ponds, including the seeps, enter small coves and creeks rather than the main stem of the Catawba. It should be noted that these coves may be used for fishing and recreation. Surface water quality samples at Riverbend should also be taken from the coves where the waste first enters the water. In addition, at many points in the day, there is little or no water moving through Mountain Island Lake. Sometimes, the power plants use so much water that the water discharged from the power plant moves upstream to the intake and concentrations are increased rather than diluted. This problem will get worse as water use increases in the future.

4. More Monitoring Is Needed

The seeps need to be monitored more frequently. The draft permit requires monthly monitoring of the seeps only for the first year; thereafter, monitoring is required only twice a year. This is inadequate for several reasons. First, the flow and levels of contaminants in the seeps are likely to change from week to week, so two snapshots per year would make it impossible to accurately assess the amount of pollutants discharging into Mountain Island Lake. While DENR has candidly admitted it would be difficult to accurately monitor the seeps even under the best of circumstances, two samples per year virtually guarantees the permit’s effluent limits and flow requirements will not be enforced. Second, this arrangement makes it easy for the polluter to cherry-pick two sampling points per year with low flows to avoid violations. Third, it makes identifying new seeps far less likely. For all these reasons, monitoring every two weeks should be required until the lagoons are dewatered and removal begins.

E. Permitting the Seeps Is An Unsafe Approach

There is nothing about leaking streams of contaminated wastewater discharging to public drinking water reservoirs like Mountain Island Lake that is necessary for dam safety. Yet in its press release announcing the draft NPDES permit, DENR's Secretary said that "some" seeps "are necessary to ensure the integrity of the dams." Tellingly, the draft NPDES permit and its Fact Sheet make no such claims, and in fact DENR has acknowledged in other contexts that the opposite is true. Seeps can weaken an embankment and cause it to fail.

In 2010, DENR stated in a dam safety Notice of Inspection:

"Two of the more common types of earth dam failures are caused or influenced by excessive seepage. Excessive seepage can produce progressive internal erosion of soil from the downstream slope of the dam or foundation toward the upstream side to form an open conduit or 'pipe.' *Seepage pressures decrease the strength characteristics of the embankment soil. The resulting reduction in embankment stability can produce a slide failure of the downstream slope.*" (emphasis added).

The 2010 DENR notice was issued regarding the Mayo Lake Dam in Roxboro, a High Hazard dam. The Riverbend dam is also rated High Hazard, but the risks from a seepage-induced dam failure are even greater here because the Riverbend lagoons contain coal ash and toxic pollutants, and would spill directly into Mountain Island Lake, the drinking water supply reservoir for nearly one million people in the Charlotte area.

In sum, the proposed permit's approach to the seeps places the drinking water supply for nearly one million people at risk. The permit should require Duke Energy to stop the seeps by dewatering the lagoons and removing their contents to dry, lined storage. Only this approach will guarantee the safety of the public, the State's waters, and Mountain Island Lake.

F. The Proposed Permit Violates North Carolina's Groundwater Rules

1. DENR Must Impose Conditions To Prevent Further Groundwater Contamination

Because of the groundwater contamination at and beyond the compliance boundary at Riverbend, the state groundwater rules prohibit DENR from issuing the proposed NPDES permit for the Riverbend coal ash lagoons.

North Carolina's groundwater rules state that "the [Environmental Management] Commission will not approve any disposal system subject to the provisions of G.S. 143-215.1 which would result in a violation of a groundwater quality standard beyond a designated compliance boundary." 15A N.C.A.C. 2L .0103(b)(2). The draft permit states on its face that it is issued under the authority of "North Carolina General State 143-215.1." The Riverbend coal ash lagoons are disposal systems for purposes of the 2L groundwater rules, with compliance boundaries set by the rules. 15A N.C.A.C. 2L .0107. Because DENR issues this permit under

authority delegated by the Environmental Management Commission, this prohibition applies to DENR as well.

There is no question that the disposal system authorized by this permit will result in a violation of a groundwater quality standard at a designated compliance boundary. It already has. There is an extensive history of documented groundwater contamination at Riverbend. Indeed, DENR has ordered Duke Energy to undertake assessment activities and filed an enforcement case in Superior Court seeking injunctive relief to abate groundwater contamination at the site. DENR's own complaint cites 59 exceedences of the groundwater standards at the Riverbend compliance boundary between 2011 and 2013 alone. Between June 2013 and February 2015 (the most recent data available on DENR's website), groundwater monitoring data reveal at least 88 additional exceedences of the groundwater standards at Riverbend.

The groundwater violations at and beyond the compliance boundary will only continue, in violation of the state groundwater rules, if the ash is allowed to remain in the unlined lagoons where it will continue leaching pollutants into the groundwater. Because this disposal system has already resulted in violations of groundwater quality standards and will continue to do so, DENR cannot issue the proposed NPDES permit without imposing conditions sufficient to ensure these violations will cease. A requirement for final closure of the Riverbend coal ash impoundments and removal of the ash to dry, lined storage is the only assured solution to stop ongoing violations of quality standards at the compliance boundary. Accordingly, the permit should require removal of the ash to safe, dry lined storage.

2. DENR Must Define Proper Compliance and Review Boundaries and Require Groundwater Monitoring Pursuant to the Groundwater Rule.

The groundwater rules direct that "[t]he [compliance] boundary shall be established by the Director, or his designee *at the time of permit issuance.*" 15A NCAC 02L .0107(c) (emphasis added). The draft permit as distributed to the public for comment includes no map designating a compliance boundary for the Riverbend facility. This is a critical omission.

Some maps issued by DENR for Riverbend have drawn the compliance boundary for the facility so that it extends *underneath* Mountain Island Lake. But DENR cannot draw a compliance boundary past the property boundary of Duke Energy. 15 NCAC 02L .0107(a), (b). Because Mountain Island Lake was formed by the impoundment of the Catawba River, a navigable river held in public trust by the state of North Carolina for the benefit of all citizens, Duke Energy does not own the lake bed underneath Mountain Island Lake and the compliance boundary must be drawn to stop at the lake shore. Furthermore, the General Assembly has clarified that "[m]ultiple contiguous properties under common ownership" may be treated as a single property for purposes of drawing the compliance boundary, but *only* if they are "permitted for use as a waste disposal system." N.C.G.S. § 143-215.1.

In its 2014 application for renewal and reissuance of its NPDES permit, Duke Energy admits its property line runs along the shoreline and does not extend into Mountain Island Lake. May 2014 Application, EPA Form 1, Figure 1, *available at*: <http://its.enr.state.nc.us/Weblink8/0/doc/250811/Page1.aspx>. That should be the end of the

matter. Compliance boundaries cannot extend beyond a facility's property line. 15A N.C.A.C. 2L.0107(a). However, even if Duke Energy were to try to take the position that it owns title to the lakebed of the Mountain Island Lake, Duke Energy cannot claim, and as a matter of federal law DENR cannot issue, authorization to treat a water of the United States as a waste disposal site.

Finally, the permit must be amended to impose a robust groundwater monitoring program that complies with the requirements of the Groundwater Rule. Currently the draft rule states only that "[t]he permittee shall conduct groundwater monitoring to determine the compliance of this NPDES permitted facility with the current groundwater standards . . . in accordance with the sampling plan approved by the Division." Draft Permit Condition A(14). Historically, DENR has required Duke Energy to monitor groundwater contamination only at the compliance boundary. But the Groundwater Rule requires more. All lands *within* a compliance boundary carry the restricted "RS" designation under the Groundwater Rule; and all lands carrying the RS designation must have a "monitoring system sufficient to detect changes in groundwater quality *within* the RS designated area." 15A NCAC 02L .0104(b), (d) (emphasis added). Under the Groundwater Rule, it is not enough to monitor at the compliance boundary to confirm violations after they happen; rather Duke Energy must monitor groundwater *within* the RS-designated compliance boundary to detect when "contaminant concentrations increase" so that "additional remedial action or monitoring" can be required if necessary. *Id.* at .0104(d). Accordingly, DENR must require and make public all the results of groundwater monitoring within the compliance boundary, including at current monitoring wells MW-9, MW-10, and MW-13.

Conclusion

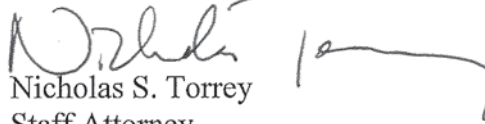
The proposed permit violates the Clean Water Act and state laws, for the many reasons set forth above. Authorizing Duke Energy's coal ash lagoons to spring leaks is contrary to the requirements and purpose of the Clean Water Act, it is unsafe, and it unfairly gives special treatment to Duke Energy at the expense of North Carolina's public waters. It is also exactly the wrong approach when numerous families who live around coal ash lagoons throughout North Carolina are currently being notified that their drinking water is contaminated and unsafe to drink. Duke Energy and the other utilities in the Carolinas have already demonstrated they can clean up coal ash lagoons and eliminate their polluted wastewater discharges; the Riverbend permit should require no less.

Thank you for your consideration of these comments.

Sincerely,

Handwritten signature of Frank S. Holleman III in cursive script.

Frank S. Holleman III
Senior Attorney

Handwritten signature of Nicholas S. Torrey in cursive script.

Nicholas S. Torrey
Staff Attorney

CC:

Gina McCarthy, EPA Administrator

Heather McTeer Toney, Regional Administrator, Region 4